

SYSTEM

Alternative Designations: Often called PT-85

**Date of Introduction:** 1985 **Proliferation:** At least 1 country

**Description:** Crew: 3-4

Combat Weight (mt): 19.0 Chassis Length Overall (m): 7.0 Height Overall (m): 2.6 Width Overall (m): 3.2 Ground Pressure (kg/cm²): INA

**Automotive Performance:** 

Engine Type: 320-hp Diesel Cruising Range (km): 500 Speed (km/h):

Max Road: 60 Max Off-Road: INA Average Cross-Country: INA

Max Swim: 10

Fording Depths (m): Amphibious

Radio: INA Protection:

Armor, Turret Front (mm): 30 (est.)
Applique Armor (mm): N/A
Explosive Reactive Armor (mm): N/A
Mineclearing Equipment: N/A
Self-Entrenching Blade: N/A
Active Protective System: No
NBC Protection System: INA
Smoke Equipment: INA

ARMAMENT

Main Armament: 85-mm rifled gun, resembles CH Types 62 and 63

Rate of Fire(rd/min): 8 Loader Type: Manual Ready/Stowed Rounds: INA Elevation (°): -5 to +18 Fire on Move: No (est.)

**Auxiliary Weapons:** 

Caliber, Type, Name: 12.7-mm (12.7 x 108), Type 54/DShKM

Mount Type: Cupola Max Aimed Range (m): 2,000

Max Effective Range (m):

Day: 1,600 unarmored ground / 800 armored (est.)

Night: INA

Tactical AA Range: 1,600 (est.)

Armor Penetration (mm): 21 at 500 m, 13 at 1,000 m

Caliber, Type, Name: 7.62-mm Machine gun PKT

Mount Type: Turret coax Max Effective Range (m):

Day: 1,000 (400-500 on the move)

Night: 800 Fire on Move: Yes Rate of Fire (rd/min): Practical: 250

Cyclic: 650, in 2-10 round bursts

ATGM Launcher:

Name: Similar to 9P111 Launch Method: Rail-launched

Guidance: MCLOS Command Link: Wire Launcher Dismountable: Yes

FIRE CONTROL

FCS Name: INA

Main Gun Stabilization: None Rangefinder: None Infrared Searchlight: Yes Sights w/Magnification:

Gunner: Day: INA

Field of View (°): INA

Acquisition Range (m): 1,500-3,000 (est.)

Night: IR, INA

Field of View (°): INA

Acquisition Range (m): 800 (est.)

Commander Fire Main Gun: INA

VARIANTS: N/A

MAIN ARMAMENT AMMUNITION

Caliber, Type, Name: 85-mm HVAP-T, BR-365PK

Max Aimed Range (m): 1,500 (est) Max Effective Range (m):

Day: 1,150 (direct fire range)

Night: 800

Armor Penetration (mm): 130 (0°) at 1,000 m

# North Korean Light Tank M1985 continued

Caliber, Type, Name: 85-mm APC-T, Type 367

Max Aimed Range (m): 1,500 (est)

Max Effective Range (m): Day: 1,150 (est) Night: 800

Armor Penetration (mm):  $120 (0^{\circ})$  at 1,000 m

Caliber, Type, Name: 85-mm HEAT-FS (variant of BK-2M)

Max Aimed Range (m): 1,500 (est)

Max Effective Range (m):

Day: 1,500/970 direct fire range

Night: 800

Armor Penetration (mm): 100 at 65°, 300-400 at 0° all ranges

Caliber, Type, Name: 85-mm, AP HE, Max Aimed Range (m): 2,000-3,000 (est.)

Max Effective Range (m):

Day: 1,500/950 direct-fire range

Night: 800

Armor Penetration (mm): 102 (0°) at 1,000 m

Caliber, Type, Name: 85-mm Frag-HE, INA (Copy of O-365K)

Max Aimed Range (m): 4,000 (est)

Max Effective Range (m): Day: 1,500 (est) Night: 800

Armor Penetration (mm): Can defeat most IFVs on impact

Other Ammunition Types: Chinese Smoke, AP HE. Russian

BR-365P HVAP-T, BK-2M HEAT-FS

**Antitank Guided Missiles:** 

Name: AT-3, -3A, -B Warhead Type: Tandem HEAT Armor Penetration (mm): 410 RHA

Range (m): 3,000

Name: AT-3C

Warhead Type: Tandem HEAT Armor Penetration (mm): 520 RHA

Range (m): 3,000

Name: AT-3C Imp/ Polk (Slovenian) Warhead Type: Precursor with HEAT Armor Penetration (mm): 580 RHA

Range (m): 3,000

Name: Red Arrow-73A (Chinese)

Warhead Type: HEAT

Armor Penetration (mm): 500 RHA

Range (m): 3,000

Name: Red Arrow-73B/C (Chinese)

Warhead Type: HEAT

Armor Penetration (mm): 600 RHA

Range (m): 3,000

Name: Malyutka-2

Warhead Type: Tandem HEAT Armor Penetration (mm): 800 RHA

Range (m): 3,000

Name: Malyutka-2 HE Warhead Type: Frag-HE Armor Penetration (mm): N/A

Range (m): 3,000

## NOTES

Chassis is derived from North Korean stretched VTT-323 APC chassis.

Main gun is of the family which includes Chinese Type 62 and 63 tank guns, Chinese Type 56/ FSU D-44 field guns, and the T-34/85 tank. Therefore, ammunition options includes the variety of ammunition available for these guns.

The AT-3-type ATGM can be upgraded by an operator with a new warhead in minutes. Low-mid level maintenance can upgrade the missile motor. The HE-Blast ATGM is used for killing personnel and destroying bunkers and other fortifications.

## United States Main Battle Tank M60A1/M60A3

. 2500	Weapons & Ammunition	Typical
A	Types	Combat Load
	105 '6 1	(2)
	105-mm rifled gun	63
Wor.	APFSDS-T	
1000	HEAT	
	HE	
	APERS-T/Canister	
	.50 cal AA MG	900
	7.62-mm coaxial MG	5,950
MCOAL	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	2,500
M60A1		

SYSTEM (M60A1 / M60A3, where their data differs)

**Alternative Designations:** INA **Date of Introduction:** 1963/1979 **Proliferation:** At least 17 countries

Description:

Combat Weight (mt): 52.5 Chassis Length Overall (m): 6.95 Height Overall (m): 3.27 Width Overall (m): 3.63 Ground Pressure (kg/cm²): 0.87

## **Automotive Performance:**

Engine Type: 750-hp Diesel Cruising Range (km): 550

Speed (km/h):
Max Road: 48
Max Off-Road: 45
Average Cross-Country: 35
Max Swim: N/A

Fording Depths (m): 1.2, 2.4 Prepared, 4 with snorkel **Radio:** AN/VRC-12, or compatible with army net radios

## Protection:

Armor, Turret Front (mm): 325 KE RHA at 2,000 m/325 CE Applique Armor (mm): Available, including modular armor Explosive Reactive Armor (mm): BLAZER and others available

Active Protective System: N/A

Mineclearing Equipment: GDLS mine roller system available

Self-Entrenching Blade: INA NBC Protection System: Yes

Smoke Equipment: Smoke grenade launchers (2 x 6) on M60A3

VEESS on later M60A3s

## ARMAMENT

## Main Armaments:

Caliber, Type, Name: 105-mm 51-cal rifled gun, M68

Rate of Fire (rd/min): 6-8 Loader Type: Manual Ready/Stowed Rounds: 16/47 Elevation (°): -10 to +20 Fire on Move: No

## **Auxiliary Weapon:**

Caliber, Type, Name: 7.62-mm (7.62x51) Machinegun, M73/M240

Mount Type: Turret coax

Max Aimed Range (m): 2,000 (est)

Max Effective Range (m):

Day: 1,800 Night: INA Fire on Move: Yes

Rate of Fire (rd/min): 600-950

Caliber, Type, Name: .50 cal (12.7-mm) AA Machinegun, M85

Mount Type: Cupola

Max Aimed Range (m): 2,000 Max Effective Range (m): Day: 2,000 (est) Night: INA

Fire on Move: Yes

Rate of Fire (rd/min): 450-550 (est)

#### FIRE CONTROL

FCS Name: M32E1 day/night periscope / M35 or M36E1 sight Main Gun Stabilization: Available / poor 2-plane

Rangefinder: M17C coincidence / AN/VVG-2 ruby laser Infrared Searchlight: Number 2 IR and white light

Sights w/Magnification:

Gunner:

Day: M31, 8x / M35 or M36E1, 8x

Field of View (°): 7.5

Acquisition Range (m): 2,000 / 3,000

Night: None, IR, II available/ None, II, thermal (See NOTES)

Field of View (°): INA / See NOTES Acquisition Range (m): INA Commander Fire Main Gun: INA

## VARIANTS

M60: Original tank was derived from M48, but with a 105-mm gun. Vehicles derived from the M60 include M60 AVLB, the M9 bulldozer, and M728 Combat Engineer Vehicle.

**M60A1:** Features a reshaped turret, added ammunition stowage, range-finder, improved fire control, and improved running gear.

**M60A2:** Unique and less successful tank version with a 152-mm gun and Shillelagh ATGM from the M-551/Sheridan.

M60A3: This version has better engine, fire control, thermal sights, ballistic computer, thermal sleeve, and improved stabilizer. A number of countries have upgraded M60A1s to comparability to the M60A3 standard. These include Israel, Austria, and Saudi Arabia.

**MAGACH-7:** Israeli variant with improved engine, track, fire control system, added stabilized sights, modular armor, armor track skirts, thermal sleeve, and with two 7.62-mm only cupola MGs.

## MAIN ARMAMENT AMMUNITION

Caliber, Type, Name:

105-mm APFSDS, UI (New Chinese) Max Aimed Range (m): 3,000 Max Effective Range (m): Day: 2,000 / 3,000 (est)

Night: INA

Armor Penetration (mm): 460 at 2,000 m

## United States Main Battle Tank M60A1/M60A3 continued

Caliber, Type, Name: 105-mm APFSDS, H6/62 (UK)

Max Aimed Range (m): 3,000 Max Effective Range (m): Day: 2,000 / 3,000 Night: INA

Armor Penetration (mm): NATO single heavy target, 5,000 m

Caliber, Type, Name: 105-mm APFSDS, DM23 (GE)

Max Aimed Range (m): 3,000 Max Effective Range (m): Day: 2,000 / 3,000 Night: INA

Armor Penetration (mm): 150, NATO single heavy target, 60° at

2,000 m

Caliber, Type, Name: 105-mm HEAT, M456 (multinational)

Max Aimed Range (m): 3,000 Max Effective Range (m):

Day: 1,500-2,000 / 1,500-2,500 (est.)

Night: INA

Armor Penetration (mm): 432, NATO single heavy target

Caliber, Type, Name: 105-mm HESH, L35 (UK)

Max Aimed Range (m): 3,000 Max Effective Range (m): Day: 2,000 / 2,000-2,500 (est.)

Night: INA

Armor Penetration (mm): NATO single heavy target

Caliber, Type, Name: 105-mm HE, HE-OE (FR)

Max Aimed Range (m): 3,000 Max Effective Range (m): Day: 2,000 / 2,500-3,000 (est.)

Night: INA

Armor Penetration (mm): INA

Caliber, Type, Name: 105-mm APERS-T, M494 (Flechette)

Max Aimed Range (m): 3,000 Max Effective Range (m): Day: 2,000 / 3,000 Night: INA

Armor Penetration (mm): N/A

**Other Ammunition Types:** Chinese Type 83/ UK L64/ US M735 APFSDS, UK L52 APDS, multinational M393 HEP-T, L39 Smoke, French OBUS 105 F1 Illuminating, Australian TC800 Canister (balls)

#### NOTES

A variety of day and night sights (including thermal and stabilized), stabilization systems and ballistic computers are available for M60A1 and M60A3. The TTS thermal sight (5x and 10x, FOV 6x4 and  $12x8^{\circ}$ ) was added to US M60A3, and has been widely fielded.

The Swiss 120-mm Compact Tank Gun is available.

Israeli IMI offers the APAM round with submunitions and a time fuze.

Israeli IAI now offers LAHAT gun-launched ATGM, with semi-active laser homing and tandem warhead; but it requires modified fire control.

Israeli IMI offers several upgrade packages, such as SABRA, for the SABRA MBT. This private venture includes extensive upgrades for mobility, lethality, and protection, including a 120-mm main gun.